Genus *Lissothrips* Hood (Thysanoptera: Phlaeothripidae) newly recorded from China, with a checklist of known species worldwide

Shaojie CAO[1, 2], Wenting ZHANG[1], Jinian FENG[1]①

1. *Key Laboratory of Plant Protection Resources and Pest Management, Ministry of Education, Entomological Museum, College of Plant Protection, Northwest A&F University, Yangling, Shaanxi 712100, China*
2. *Weinan Vocational and Technical College, Weinan, Shaanxi 714000, China*

Abstract: The genus *Lissothrips* Hood, 1908 is reported for the first time in China. The newly recorded species *Lissothrips okajimai* Mound, 1989 is illustrated and redescribed. A checklist of the genus *Lissothrips* worldwide is presented.

Key words: Phlaeothripinae; *Lissothrips*; taxonomy

中国管蓟马科一新纪录属及世界种名录（缨翅目：管蓟马科）

曹少杰 [1,2]，张文婷 [1]，冯纪年 [1]①
1. 西北农林科技大学植保资源与病虫害治理教育部重点实验室，西北农林科技大学植保学院昆虫博物馆，陕西 杨凌 712100；2. 渭南职业技术学院，陕西 渭南 714000

摘要：记述中国 1 新纪录属：软管蓟马属 *Lissothrips* Hood, 1908 及 1 新纪录种：*L. okajimai* Mound, 1989，对该新纪录种进行了详细描述、绘图和拍照，提供了软管蓟马属世界种名录及其分布。

关键词：管蓟马亚科；软管蓟马属；分类

Introduction

The genus *Lissothrips* was established by Hood in 1908 with *Lissothrips muscorum* as its type-species. This genus belongs to the *Phlaeothrips* lineage and, along with the genus *Williamisella* Hood, 1925 probably comprises a genus-group (Okajima 2006). The genus *Lissothrips* is a small genus of Phlaeothripinae with 23 species in the world (Mound 2015). One species has been collected in Fiji, one from Japan, three from New Zealand, six from Australia, and the rest of the species are from the New World (Mound & Walker 1986; Mound 1989; Mound & Tree 2015). Recently, in our collections of Chinese thrips, a species in the genus *Lissothrips* was found; this represents the first record of this genus from China.

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① Corresponding author, E-mail: jinianf@nwsuaf.edu.cn

Material and methods

The specimens were mounted onto slides in neutral balsam. Methods follow Zhang *et al.* (2006). Illustrations were taken using a Nikon SMZ1500 stereomicroscope with a camera lucida. All measurements are given in micrometers. The following abbreviations are used for the pronotal setae: am—anteromarginal setae, aa—anteroangular setae, ml—midlateral setae, epim—epimeral setae, pa—posteroangular setae. The specimens examined are deposited in the Entomological Museum of the Northwest A&F University, Yangling, Shaanxi, China (NWAFU).

A checklist of the known species in the genus *Lissothrips* in the world

Lissothrips clayae Mound, 1989 — Trinidad.
Lissothrips corticosus Mound & Tree, 2015 — Australia (Queensland).
Lissothrips dentatus Mound & Walker, 1986 —New Zealand (Auckland).
Lissothrips discus Mound & Tree, 2015 —Australia (Queensland).
Lissothrips dispar Hood, 1954 —Brazil (Belem).
Lissothrips dugdalei Mound & Walker, 1986 —New Zealand (Secretary Island).
Lissothrips eburifer Hood, 1954 —Brazil (Nova Teutonia).
Lissothrips flavidus Hood, 1960 —Brazil (Santa Catarina).
Lissothrips flavitibia Moulton, 1944 —Fiji (Viti Levu).
Lissothrips furvoviridis Johansen, 1982 — Mexico.
Lissothrips gersoni Mound & Walker, 1986 —New Zealand (North Island).
Lissothrips hurricanus (Stannard, 1953) — Jamaica.
Lissothrips hypni Mound & Tree, 2015 —Australia (Queensland).
Lissothrips muscorum Hood, 1908 —USA (Urbana).
Lissothrips obesus Hood, 1950 —Brazil (Sao Paulo).
Lissothrips okajimai Mound, 1989 — Japan (Honshu); China (Hunan).
Lissothrips tallagandai Mound & Tree, 2015 —Australia (New South Wales).
Lissothrips taverni Mound & Tree, 2015 —Australia (Norfolk Island).
Lissothrips tepoztlanensis Johansen & Mojica, 1984 — Mexico.
Lissothrips thomsonae Mound & Tree, 2015 —Australia (Queensland).
Lissothrips uniformis Pelikan, 1964 — Argentina.
Lissothrips xalapaensis Johansen & Mojica, 1984 — Mexico.
Lissothrips zacualtipanensis Johansen & Mojica, 1984 — Mexico.

Taxonomy

***Lissothrips* Hood, 1908**, new record to China

Lissothrips Hood, 1908. *Bulletin of the Illinois State Laboratory of Natural History*, 8(2): 365.

Type species: *Lissothrips muscorum* Hood, 1908.

Diagnosis. Small sized species. Head usually longer than wide. Postocular setae developed, ocelli setae small. Ocelli usually absent. Antennae 7 or 8-segmented, segment III smaller than segment II and IV, which is the significant characteristic of this genus, and usually with two sense cones. Segment VII broadly attached to segment VIII; mouth-cone developed. Maxillary stylets long, extending into head. Maxillary bridge present or absent.

Prothoracic notopleural sutures incomplete. Pronotum with five pairs of major setae. Anteromarginal setae sometimes involuted. Prosternal basantra and ferna present. Wings absent or present. Metathoracic sternopleural sutures absent. Pelta varied in shape. Abdominal tergites usually without retaining setae. Tergite IX setae B1 and B2 longer than tube, but B2 setae of male short.

***Lissothrips okajimai* Mound, 1989** (Figs. 1–9)**,** new record to China

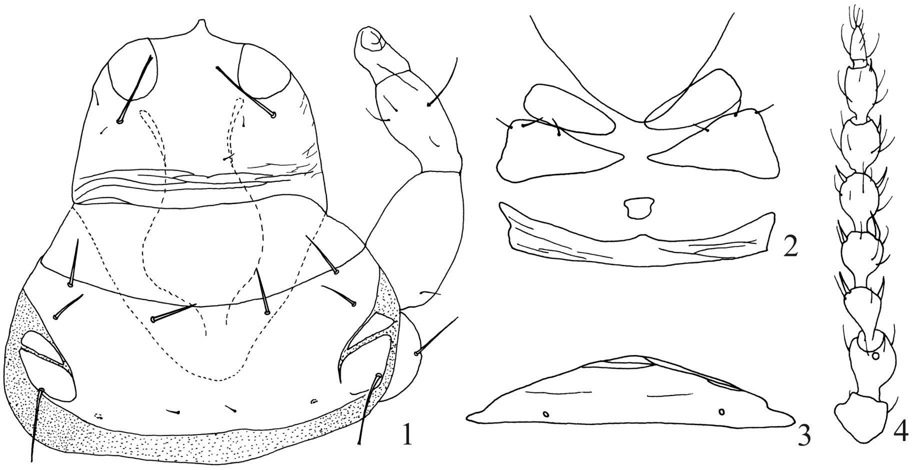
Lissothrips okajimai Mound, 1989. *Zoological Journal of the Linnean Society*, 96: 1–13.

Female (apterous). Body length 1050. Body brown; all legs almost concolourous with body; all tibiae and tarsi slightly brown. Antennal segments I–II faint yellow, the rest of segments brown.

Head (Figs. 1, 5) about 0.7 times as long as wide. Cheeks weakly rounded, dorsal surface with reticulation. Postocular setae developed, expanded at apex. Ocelli absent. Eyes about 0.4 times as long as head. Antenna (Figs. 4, 8) 8-segmented, segment III short and rounded; segment VIII retracted at base; segment III–IV each with two sense cones. Mouth cone broadly rounded. Maxillary stylets (Fig. 5) retracted to eyes; maxillary bridge weak.

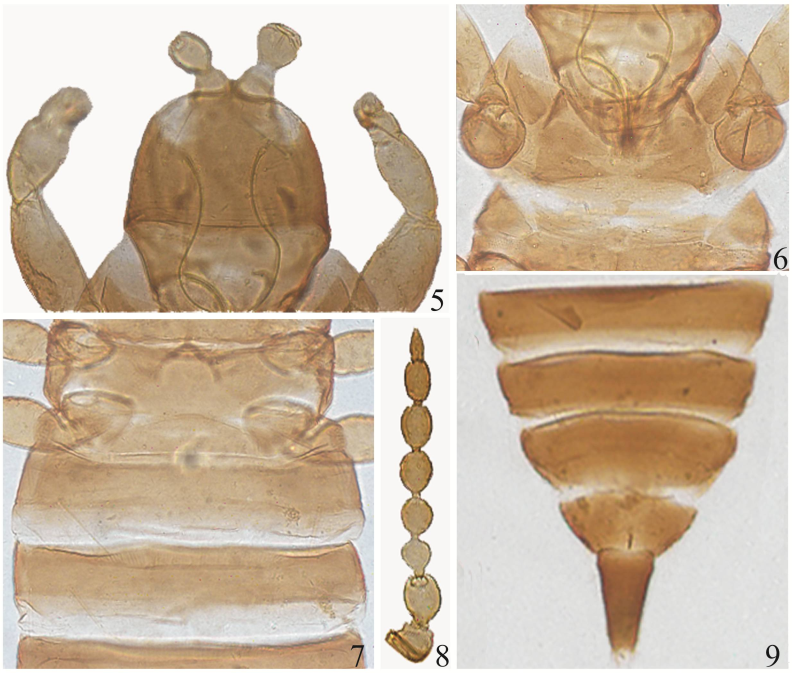
Pronotum (Figs. 1, 6) short and broad, 0.8 times as long as head at middle. Pronotum (Fig. 1) smooth, major setae developed, expanded at apex. Praepectus (Figs. 2, 6) present and developed, probasisternum triangular shaped. Mesopraesternum (Figs. 2, 6) boat-shaped, with transverse striae, but sometimes absent. Fore tarsus with no tooth.

Pelta (Figs. 3, 7) has broad base, anterior margin rounded, a pair of campaniform sensilla present. Abdominal tergite II to VII without retaining setae. Tergite IX setae B1 almost as long as setae B2, pointed at apex. Tube（Fig. 9）slightly shorter than head, 0.78 times as long as head. Anal setae shorter than tube.



Figures 1–4. *Lissothrips okajimai* Mound, 1989. 1. Head and pronotum, dorsal view; 2. Prosternum; 3. Abdominal pelta I; 4. Antennal segments I–VIII.

Measurements of female in microns. Total distended body length 1050. Head median length 118. Width across eyes 118; eye length 46. Postocular setae length 48. Pronotum median length 95, anterior width 204, posterior width 235; major setae aa 44, am 41, ml 43, epim 52. Tube length 93, basal width 56, apical width 23. Antennal segments I–VIII length (width) are as follows: 21 (26); 29 (26); 27 (21); 27 (23); 32 (22); 31 (21); 28 (18); 25 (10).



Figures 5–9. *Lissothrips okajimai* Mound, 1989. 5. Head, fore legs; 6. Prothorax; 7. Abdominal I pelta; 8. Antennal segments I–VIII; 9. Abdominal V–VIII, Tube.

Specimens examined. China, 2♀, Hunan Province, 771 m, Shunhuang Mountain National Forest Park, 28-V-2011, coll. Jigang JIANG from mosses.

Distribution. China (Hunan); Japan.

Diagnosis. The species of *Lissothrips okajimai* was first described by Mound (1989) and the types were collected in Japan. The species of microptera in Honshu, Japan has a small tooth in both sexes, while the species of *L. okajimai* collected in China is female and apterous with fore tarsus not obvious. This species resembles *L. discus* in structure, but the two species also have their own characteristics. In *L. okajimai*, the antennal III and IV each has two sense-cones; female microptera fore tarsus has a small tooth; and the mesopraesternum is boat-shaped. In *L. discus*, the antennal III has no sense cones and IV has 3 stout sense cones; female microptera fore tarsus has no tooth; and mesopraesternum reduces to slender lateral triangles.

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